



Osmium Chloride Solution		Pricing >
Osmium(III) Chloride		Pricing >
Linear Formula	OsCl ₃	
Pubchem CID	83468	
MDL Number	MFCD00011148	
EC No.	236-587-7	
IUPAC Name	trichloroosmium	
Beilstein/Reaxys No.	N/A	
SMILES	Cl[Os](Cl)Cl	
Inchl Identifier	InChI=1S/3ClH.Os/h3*1H;/q;;;+3/p-3	
Inchl Key	UAIHPMFLFVHDIN-UHFFFAOYSA-K	
Signal Word	Danger	
Hazard Statements	H301+H311+H331-H314	
Hazard Codes	T, C	
Precautionary Statements	P260-P280-P303+P361+P353-P304+P340+P310-P305+P351+P338+P310	
Flash Point	Not applicable	
Risk Codes	23/24/25-34	
Safety Statements	26-36/37/39-45	
RTECS Number	N/A	
Transport Information	UN 3288 6.1 / PGII	
WGK Germany	3	
GHS Pictograms	GHS05 Corrosive  GHS06 Skull and Crossbones 	

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SAFETY DATA SHEET

Date Accessed: 05/03/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #13444-93-4

Relevant identified uses of the substance:

Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:

Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

2.2 GHS Label elements, including precautionary statements



Pictogram

Signal word Danger

Hazard statement(s)

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled

H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P260 Do not breathe dust or mist.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face

protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P322 Specific measures (see supplemental first aid instructions on this label).
P361 Remove/Take off immediately all contaminated clothing.
P363 Wash contaminated clothing before reuse.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : Cl₃O₂

Molecular Weight : 296.59 g/mol

CAS-No. : 13444-93-4

EC-No. : 236-587-7

No ingredients are hazardous according to OSHA criteria.

No components need to be disclosed according to the applicable regulations.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

Take victim

immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
no data available

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation.

Avoid breathing Vapors, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust.

Sweep up and shovel. Keep in suitable, closed

containers for disposal.
6.4 Reference to other sections
For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
Keep in a dry place.
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.
8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
Personal protective equipment
Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Full contact
Material: Nitrile rubber

Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)
data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method:
EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance Form: powder
- b) Odor no data available
- c) Odor Threshold no data available

d) pH no data available
e) Melting point/freezing point
no data available
f) Initial boiling point and boiling range
no data available
g) Flash point no data available
h) EVaporation rate no data available
i) Flammability (solid, gas) no data available
j) Upper/lower flammability or explosive limits
no data available
k) Vapor pressure no data available
l) Vapor density no data available
m) Relative density no data available
n) Water solubility no data available
o) Partition coefficient: noctanol/water
no data available
p) Auto-ignition temperature
no data available
q) Decomposition temperature
no data available
r) Viscosity no data available
s) Explosive properties no data available
t) Oxidizing properties no data available
9.2 Other safety information
no data available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
no data available
10.4 Conditions to avoid
no data available
10.5 Incompatible materials
Strong oxidizing agents
10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL

INFORMATION

11.1 Information on toxicological effects

Acute toxicity

no data available

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical
safety assessment not required/not conducted
12.6 Other adverse effects
no data available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a
licensed disposal company.
Contaminated packaging
Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US)
UN number: 3288 Class: 6.1 Packing group: II
Proper shipping name: Toxic solid, inorganic, n.o.s.
(Osmiumtrichlorid)
Marine pollutant: No
Poison Inhalation Hazard: No
IMDG
UN number: 3288 Class: 6.1 Packing group: II EMS-
No: F-A, S-A
Proper shipping name: TOXIC SOLID, INORGANIC,
N.O.S. (Osmiumtrichlorid)
Marine pollutant: No
IATA
UN number: 3288 Class: 6.1 Packing group: II
Proper shipping name: Toxic solid, inorganic, n.o.s.
(Osmiumtrichlorid)

SECTION 15. REGULATORY INFORMATION

SARA 302 Components
SARA 302: No chemicals in this material are subject
to the reporting requirements of SARA Title III,
Section 302.
SARA 313 Components
SARA 313: This material does not contain any
chemical components with known CAS numbers that
exceed the
threshold (De Minimis) reporting levels established by
SARA Title III, Section 313.
SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components
No components are subject to the Massachusetts
Right to Know Act.
Pennsylvania Right To Know Components
Osmiumtrichlorid
CAS-No.
13444-93-4
Revision Date
New Jersey Right To Know Components
Osmiumtrichlorid
CAS-No.
13444-93-4
Revision Date
California Prop. 65 Components
This product does not contain any chemicals known to
State of California to cause cancer, birth defects, or
any other
reproductive harm.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No.
1907/2006 (REACH). The above information is
believed to be correct but does not purport to be all
inclusive and shall be used only as a guide. The
information in this document is based on the present
state of our knowledge and is applicable to the
product with regard to appropriate safety precautions.
It does not represent any guarantee of the properties
of the product. American Elements shall not be held
liable for any damage resulting from handling or from
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